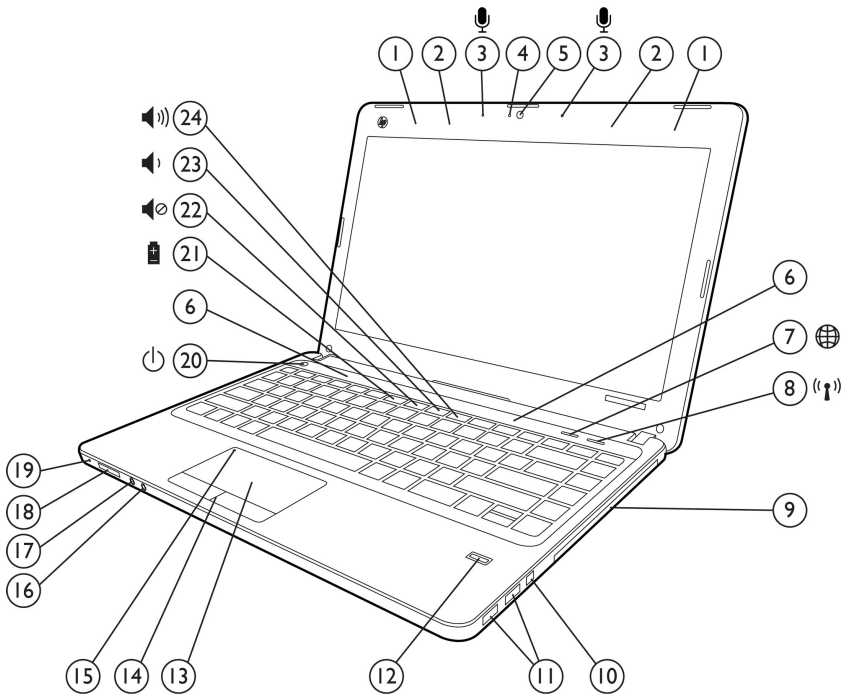
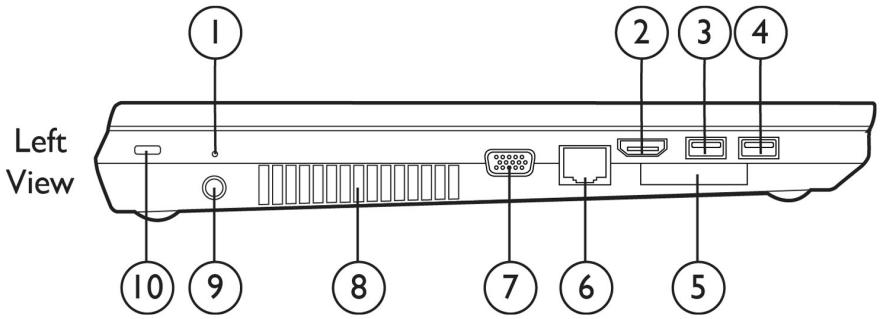
Overview



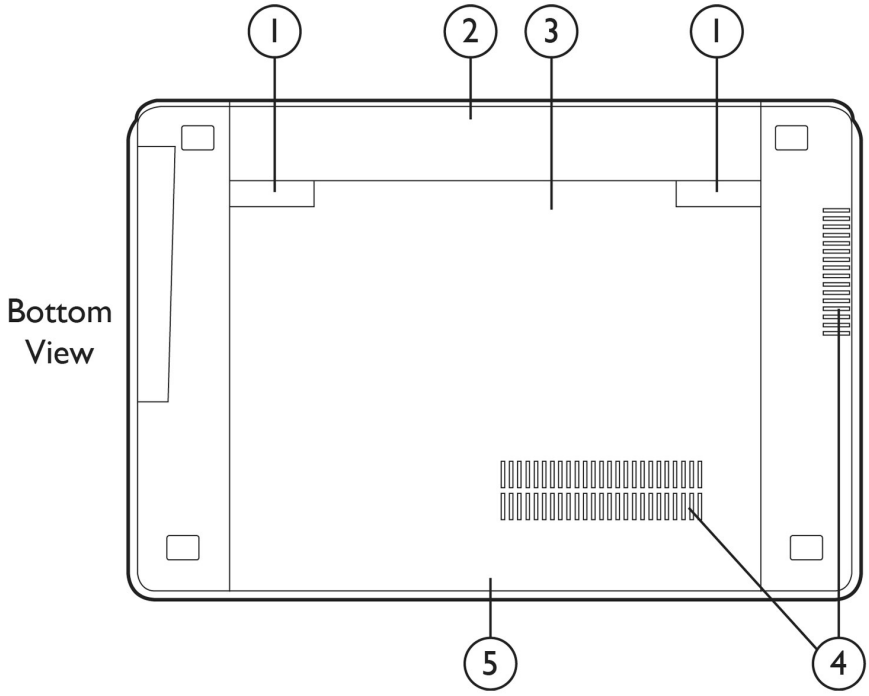
1. WWAN antennas (select models)
2. WLAN antennas
3. Dual-microphone array*
4. Webcam LED indicator (with optional webcam)
5. Optional HD webcam
6. Stereo speakers
7. HP QuickWeb button with LED indicator
8. Wireless on/off button with LED indicator
9. Optical drive (select models)
10. Optional RJ-11/modem port
11. (2) USB 2.0 ports
12. Optional HP Fingerprint Sensor
13. Touchpad
14. Touchpad pick buttons
15. Touchpad on/off button with LED indicator
16. Stereo microphone in
17. Stereo headphone/line out
18. Media Card Reader
19. Hard drive activity LED indicator
20. Power button with LED indicator
21. HP Power Assistant function key
22. Volume mute function key
23. Volume down function key
24. Volume up function key

* Models without optional webcam have single integrated microphone.

Overview



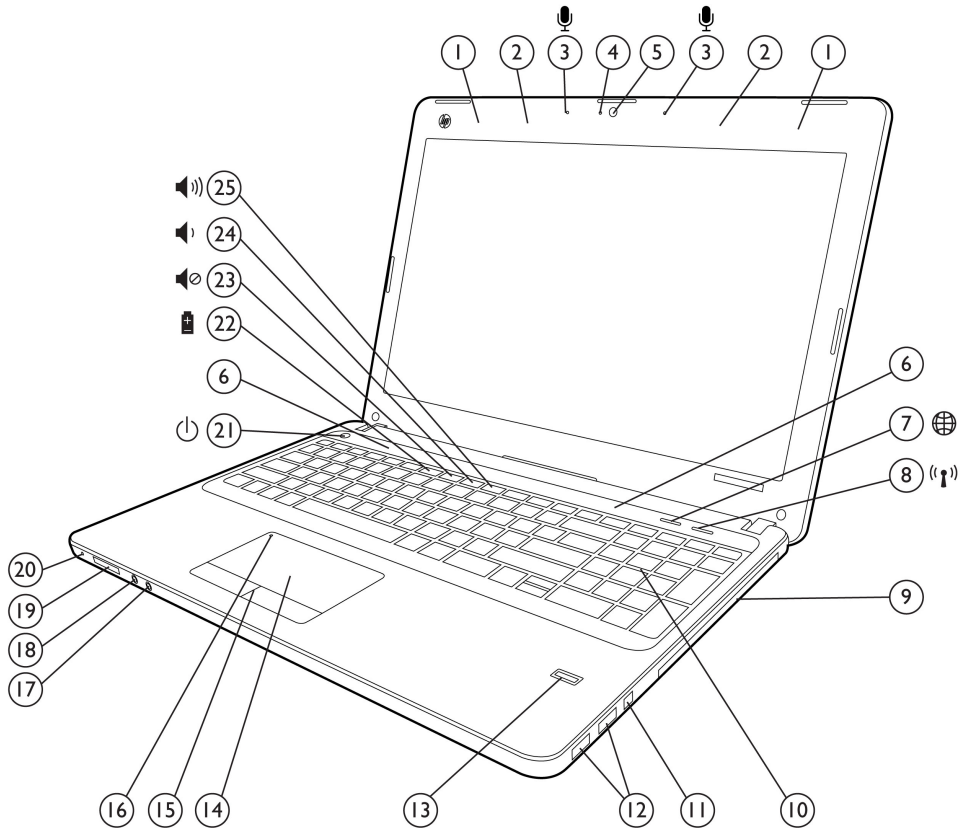
1. Battery charging LED indicator
2. HDMI 1.3a port
3. USB 2.0 port
4. USB 2.0 port
5. ExpressCard/34 slot
6. RJ-45/Ethernet port
7. VGA/external monitor connector
8. Vent
9. Power connector
10. Security lock slot



1. Battery and access cover release latches
2. Battery bay
3. SIM card slot (select units, located inside battery bay)
4. Vents
5. Hard drive bay

HP ProBook 4530s Notebook PC
HP ProBook 4730s Notebook PC

Overview



1. WWAN antennas (4530s models)
2. WLAN antennas
3. Dual-microphone array*
4. Webcam LED indicator (with optional webcam)
5. Optional HD webcam
6. Stereo speakers
7. HP QuickWeb button with LED indicator
8. Wireless on/off button with LED indicator
9. Optical drive (select models)
10. Numeric keypad
11. Optional RJ-11/modem port
12. (2) USB 2.0 ports
13. HP Fingerprint Sensor
14. Touchpad
15. Touchpad pick buttons
16. Touchpad on/off button with LED indicator
17. Stereo microphone in
18. Stereo headphone/line out
19. Media Card Reader
20. Hard drive activity LED indicator
21. Power button with LED indicator
22. HP Power Assistant function key
23. Volume mute function key
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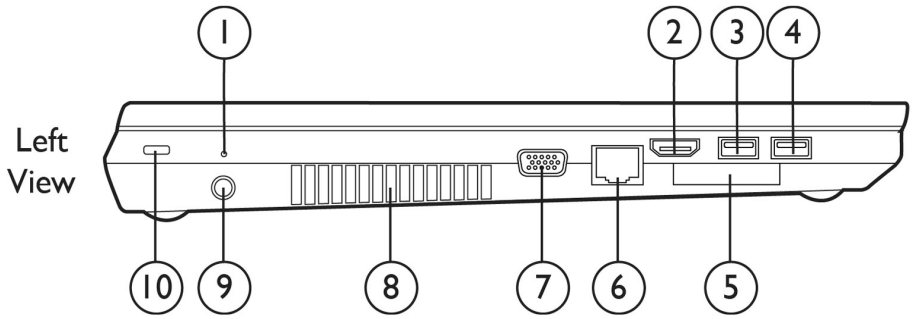
25. Volume up function key

Overview



1. Battery charging LED indicator
2. HDMI 1.3a port
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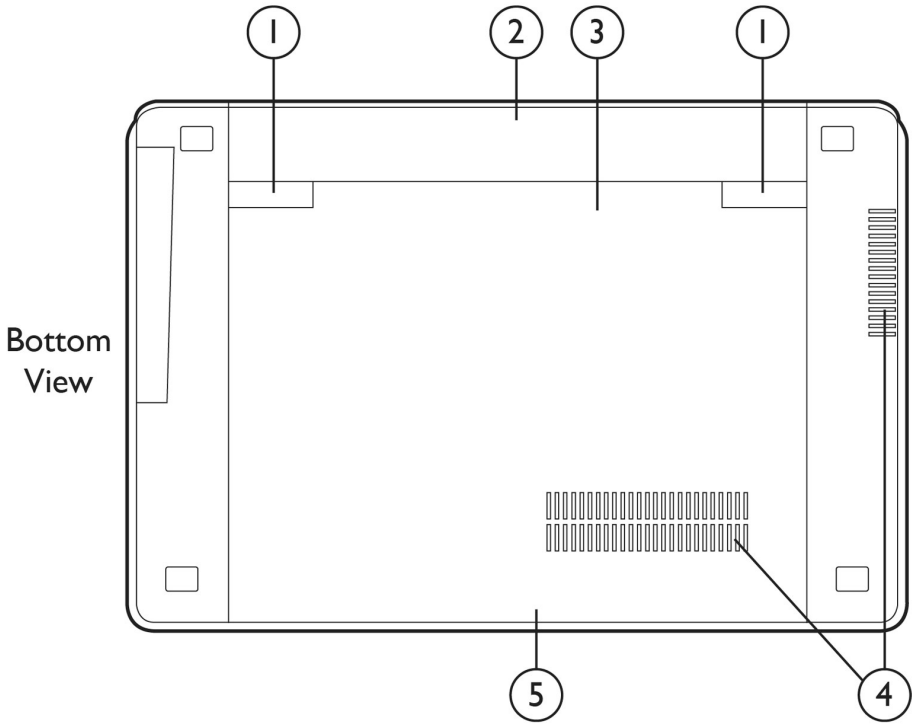

1. Battery and access cover release latches
2. Battery bay
3. SIM card slot (select units, located inside battery bay)
4. Vents
5. Hard drive bay

Overview

At A Glance

- Genuine Windows 7 versions, SUSE Linux, or FreeDOS
- Thin, lightweight design with brushed aluminum finish for durability and style, wear-resistant HP DuraFinish
- Full-sized spill-resistant keyboard; full separate numeric keypad on HP ProBook 4530s and 4730s
- Larger Touchpad with gestures support, on/off button with LED indicator
- Enhanced security features including HP ProtectTools, HP Face Recognition, optional HP Fingerprint Sensor, and optional HP Privacy Filter
- Optional HD webcam with dual-microphone array for video conferencing
- HDMI port for connecting to high-resolution displays; USB 2.0 ports
- ArcSoft TotalMedia Suite for playing, creating, and editing video and audio files
- SRS Premium Sound optimized for high fidelity audio
- Widescreen LED-backlit HD display with 16:9 aspect ratio
  HP ProBook 4430s: 14.0-inch diagonal HD anti-glare
  HP ProBook 4530s: 15.6-inch diagonal HD anti-glare
  HP ProBook 4730s: 17.3-inch diagonal HD+ anti-glare
- Choice of 2nd generation Intel® Core™ i7, i5 and i3 processors, and Intel Celeron processor
- HP QuickWeb for convenient online access without long boot-up times
- Flexible wireless connectivity options controlled by HP Connection Manager:
  - Integrated HP Mobile Broadband Module*
  - Integrated 802.11 b/g/n wireless LAN module
  - Integrated 802.11 a/b/g/n or b/g/n with Bluetooth 3.0 High Speed (HS) combo card**
- HP DayStarter for calendar display during startup
- HP Power Assistant to conserve power, increase battery run-time, monitor power needs, report workforce power consumption
- BFR/PVC-free***, ENERGY STAR®† qualified and EPEAT TBD registered in the U.S. EPEAT status varies by country- please see epeat.net.

* Available only on HP ProBook 4530s with integrated graphics.
** Available on select models.
*** Meeting the industry definition of 'BFR/PVC-free' per the iNEMI Position Statement on "Low Halogen" Electronics. Plastic parts incorporated into the chassis generally contain < 1000 ppm (0.1%) of bromine or chlorine. Printed circuit board and substrate laminates generally contain < 1500 ppm (0.15%) of total bromine and chlorine. Service parts after purchase may not be BFR/PVC-free. External accessories, including power supplies, power cords, and peripherals as well as the following customer-configurable internal components: ATT SIM card are not BFR/PVC-free.

† Microsoft Windows is required for ENERGY STAR qualification. 25% energy reduction as per listed in the ENERGY STAR official website: http://www.energystar.gov/index.cfm?fuseaction=find_a_product.showProductGroup&pgw_code=CX

Standard Features (availability may vary by country)

Processors	2nd Generation Intel Core i7 Processors Intel Core i7-2630QM Processor (2.0 GHz, 6 MB L3 cache, 4 cores/8 threads, 45W)* † Up to 2.9 GHz with Intel Turbo Boost Technology Intel Core i7-2620M Processor (2.70 GHz, 4 MB L3 cache, 2 cores/4 threads, 35W)* Up to 3.40 GHz with Intel Turbo Boost Technology 2nd Generation Intel Core i5 Processors Intel Core i5-2520M Processor (2.50 GHz, 3 MB L3 cache, 2 cores/4 threads, 35W)* Up to 3.20 GHz with Intel Turbo Boost Technology Intel Core i5-2410M Processor (2.30 GHz, 3 MB L3 cache, 2 cores/4 threads, 35W)* Up to 2.90 GHz with Intel Turbo Boost Technology 2nd Generation Intel Core i3 Processors Intel Core i3-2330M Processor (2.20 GHz, 3 MB L3 cache, 2 cores/4 threads, 35W)* Intel Core i3-2310M Processor (2.10 GHz, 3 MB L3 cache, 2 cores/4 threads, 35W)* Intel Celeron Processor Intel B810 Processor (1.60GHz, 2MB L3 Cache, 2 threads, 35W)* NOTE: Processor speed denotes maximum performance mode; processors will run at lower speeds in battery optimization mode. * Intel's numbering is not a measurement of higher performance. † Only available on HP ProBook 4530s and 4730s with discrete graphics.

Operating System	Preinstalled	Genuine Windows 7 Professional 32* Genuine Windows 7 Professional 64* Genuine Windows 7 Home Premium 32* Genuine Windows 7 Home Premium 64* Genuine Windows 7 Home Basic 32* (select countries) SuSE Linux Enterprise Desktop 11 FreeDOS
	Supported	Genuine Windows XP Professional 32

* System may require upgraded and/or separately purchased hardware and/or a DVD drive to install the Windows 7 software and take full advantage of Windows 7 functionality. See: http://www.microsoft.com/windows/windows-7/ for details.

** Certain Windows Vista product features require advanced or additional hardware. See: http://www.microsoft.com/windowsvista/getready/hardwarereqs.mspx and http://www.microsoft.com/windowsvista/getready/capable.mspx for details. Windows Vista Upgrade Advisor can help you determine which features of Windows Vista will run on your computer. To download the tool, visit: http://www.windowsvista.com/upgradeadvisor.

Chipset	Mobile Intel HM65 Express Chipset

Standard Features (availability may vary by country)

Graphics		Models with integrated graphics (not an option on HP 4730s): Intel HD Graphics 3000 Microsoft DirectX 10.1 (Shader Model 4.1) and OpenGL 3.0 capable NOTE: Intel HD Graphics for configurations with Celeron processor Models with discrete graphics (not an option on HP 4430s)*: AMD Radeon™ HD 6490M with 512 MB or 1 GB dedicated GDDR5 video memory Microsoft DirectX 11 (Shader Model 5.0) and OpenGL 4.0 capable * AMD Dynamic Switchable Graphics technology switches automatically between the Intel integrated graphics and the AMD Radeon discrete graphics to stretch battery life when running typical productivity applications or to enable discrete graphics when running demanding applications. NOTE: This feature requires Windows 7 Professional, Home Premium, and/or Home Basic OS. Full enablement of all discrete graphics video and display features may not be supported on all applications (e.g., OpenGL applications will run on the integrated graphics).
Display	**Internal**	HP ProBook 4430s: 14.0-inch diagonal LED-backlit HD anti-glare (1366 x 768 resolution) HP ProBook 4530s: 15.6-inch diagonal LED-backlit HD anti-glare (1366 x 768 resolution) HP ProBook 4730s: 17.3-inch diagonal LED-backlit HD+ anti-glare (1600x900 resolution) Optional HP Privacy Filter
	External	Up to 32-bit per pixel color depth VGA port supports resolutions up to 2048 x 1536 at 75 Hz, and lower resolutions at up to 100 Hz. HDMI port supports direct connection to high-definition displays with up to 1920 x 1080 resolution and 7-channel audio with one convenient cable (not included). NOTE: Resolutions are dependent upon monitor capability, and resolution and color depth settings.
Memory	**Standard**	DDR3 PC3-10600 SDRAM (1333 MHz) Two SODIMM slots supporting dual-channel memory 1 GB, 2 GB, and 4 GB SODIMMs
	Maximum	Upgradeable to 8 GB with 4 GB SODIMMs in slots 1 and 2
	Dual-channel	Maximized dual-channel performance requires SODIMMs of the same size and speed in both memory slots.
		NOTE: Due to the non-industry standard nature of some third-party memory modules, we recommend HP branded memory to ensure compatibility. If you mix memory speeds, the system will perform at the lower memory speed. Full availability of 4 GB or more of memory requires Windows Vista Business 64-bit or Linux. With Windows 32-bit operating systems, the amount of usable memory is dependent upon your configuration, so that above 3 GB all memory may not be available due to system resource requirements.

Standard Features (availability may vary by country)

Communications	Realtek Ethernet (10/100/1000 NIC)* Optional 56K V.92 modem** * The term "10/100/1000" or "Gigabit" Ethernet indicates compatibility with IEEE standard 802.3ab for Gigabit Ethernet, and does not connote actual operating speed of 1 Gb/s. For high-speed transmission, connection to a Gigabit Ethernet server and network infrastructure is required. ** Designed for downloads from 56K modem compliant sources. Maximum achievable download transmission rates currently do not reach 56 KB/s, and will vary with line conditions. Modem availability is subject to country regulatory approval.

Wireless Devices	Support for a broad range of secure, integrated wireless options featuring support for the latest industry standards.	
	Mobile Broadband options	Mobile Broadband (WWAN) requires a Windows operating system and is available in select countries as a factory configurable feature for the HP ProBook 4530s with integrated graphics only. Two 850/900/1575/1700/1800/1900/2100 MHz antennas integrated in the top of the display panel support current and future WWAN technologies. NOTE: Separately purchased mobile network operator service is required.
	HP un2430 EV-DO/HSPA Mobile Broadband Module (availability expected May, 2011)	Integrated mobile broadband module with Gobi global mobile Internet technology that provides connectivity to both CDMA (EVDO) and UMTS (HSPA) networks. It also provides GPS functionality for various mapping applications and security applications such as Computrace Pro for HP ProtectTools.
	HP hs2340 HSPA+ Mobile Broadband Module	Integrated mobile broadband module that provides connectivity to both HSPA and HSPA+ (UMTS) networks. It also provides standalone, Internet and network assisted GPS functionality for various mapping applications and security applications such as Computrace Pro for HP ProtectTools.
	802.11 integrated wireless LAN options	Wi-Fi certified* Wired Equivalent Privacy (WEP) support up to 128-bit keys Wi-Fi Protected Access (WPA) and WPA2 support 802.1x authentication support, including EAP-TLS, EAP-TTLS, PEAP-GTC, PEAP-MSCHAPv2, and LEAP Advanced Encryption Standard (AES) support Dual antennas integrated in the display enclosure
	Realtek 8188GN 802.11 b/g/n 1x1 WiFi Adapter	Integrated support for 802.11 b, g, and n Up to 150 mbps data rate
	Ralink 3592BC8 802.11 a/b/g/n 2x2 WiFi and Bluetooth 3.0+HS Combo Adapter*	Integrated support for 802.11 a, b, g, and n Up to 300 mbps data rate Bluetooth Specification 3.0 High Speed (HS)* and 2.1 compliant Works with a wide range of Bluetooth devices
	Atheros 9285GN 802.11 b/g/n 1x1 WiFi and 3011 Bluetooth 3.0+HS Combo Adapter*	Integrated support for 802.11 b, g, and n Up to 150 mbps data rate Bluetooth Specification 3.0 High Speed (HS)* and 2.1 compliant Works with a wide range of Bluetooth devices
	* Bluetooth 3.0+HS support requires a Windows operating system.	

Standard Features (availability may vary by country)

Keyboard	The HP spill-resistant keyboard is designed using a thin layer of Mylar film under the keyboard. The 101/102-key compatible keyboard features a full-pitch key layout with desktop keyboard features, such as editing keys, both left and right control and alt keys, and function keys. US and International key layouts are available. The HP ProBook 4530s and 4730s include a separate numeric keypad.	
Launch Buttons and Function Keys	Separate launch buttons provide easy access to wireless on/off and HP QuickWeb. Function keys provide control of features including: standby mode, display brightness, external display, HP Power Assistant, volume mute, volume down, volume up, and media control.	
Pointing device	Touchpad with gestures support, on/off button with LED indicator, two-way scroll, two pick buttons	
Expansion card slots	**ExpressCard/34 slot**	Supports ExpressCard/34 (34 mm x 75 mm x 5 mm) card sizes
	Media Card Reader	Supports High Speed SD 3.0 (Secure Digital), MMC (MultiMedia Card), Memory Stick, Memory Stick Pro, Memory Stick Pro Duo*, SD Micro, MMC Micro
	* Memory Stick Pro Duo Adapters are required and sold separately. Inserting a Memory Stick Pro Duo Card directly into your notebook could damage the memory card and/or notebook.	
Internal Storage	**Hard drives**	320/500 GB 7200 rpm SMART SATA II 320/750 GB 5400 rpm SMART SATA II
	NOTE: Up to 15 GB is reserved for the system recovery software.	
	HP 3D DriveGuard (Windows models only)	The hard drive is mounted directly to the notebook frame, reducing the transmission of shock to the hard drive. Uses three-axis digital motion detection with intelligent sensitivity to help protect the hard drive during normal use from shock and vibration. The digital accelerometer temporarily halts all data transfer and parks the hard drive when abrupt motion is detected.
Removable Storage	**Fixed optical drives**	Blu-ray ROM DVD+/-RW SuperMulti DL Drive* DVD+/-RW SuperMulti DL Drive DVD-ROM Drive
	Weight saver	
	* Blu-ray drives not available on configurations with an Intel Celeron processor.	

Standard Features (availability may vary by country)

Interfaces	VGA	One
	HDMI 1.3a	One
	Stereo microphone in	One
	Stereo headphone/line out	One
	Power connector	One
	RJ-11/modem (optional)	One
	RJ-45/Ethernet	One
	USB 2.0	Four
	LED status indicators	Nine

Audio/Visual

SRS Premium Sound™
Integrated stereo speakers
Integrated microphone (dual-microphone array when equipped with optional webcam)
Function keys for volume mute, volume up, volume down; play, rewind, and fast-forward of video and audio files
Stereo headphone/line out
Stereo microphone/line in

Optional 720p HD webcam

- HD format (widescreen)
- Supports videoconferencing and still image capture
- High quality fixed focus lens
- Video capture at various resolutions up to 1280x720 resolution (720p) and up to 30fps
- M-JPEG compression supports higher frame rates for video capture and videoconferencing
- Improved low light sensitivity
- Improved dynamic range

Software	Preinstalled software with Windows Operating System	HP Recovery Manager HP Support Assistant HP ProtectTools Security Manager HP ProtectTools for Central Management HP Hotkey Support HP QuickWeb HP Power Assistant HP Connection Manager 4.0 HP DayStarter Microsoft Office 2010 preloaded (purchase of a Product Key required to activate a full Office 2010 suite)* Norton Internet Security 2011** PDF Complete Special Edition*** ArcSoft Total Media Suite HP Webcam Software (select models) Skype
	Additional software available from the web	HP SoftPaq Download Manager

Standard Features (availability may vary by country)

* Microsoft Office 2010 Preloaded includes reduced functionality versions of Word and Excel. Purchase of Product Key required to activate full Office 2010 suite available at participating resellers/retailers and http://www.office.com.
** Norton Internet Security 2011 includes 60 days of complimentary live updates; subscription required for live updates thereafter. Internet access required to receive updates.
*** PDF Complete Special Edition 60 day trial; purchase license afterwards for full functionality.

HP Recovery Manager

Models shipped with Windows 7 or Windows Vista include HP Recovery Manager. HP Recovery Manager enables fast recovery of the factory preinstalled image if the system becomes corrupted or if important system files are accidentally deleted. Up to 20 GB of the hard drive is reserved for the system recovery software.

Security

Standard Features

HP ProtectTools Security Manager (standard modules include)

- Credential Manager
- Computrace* Pro
- Device Access Manager
- Drive Encryption
- Face Recognition (webcam configurations only)
- File Sanitizer
- Privacy Manager
- Embedded Security

Enhanced Pre-Boot Security
HP SpareKey
One-Step Logon
Security lock slot
Support for Intel AT**

Optional Features

HP Fingerprint Sensor
HP Privacy Filter

* The Computrace agent is shipped turned off, and must be activated by customers when they purchase a subscription with terms ranging from one to five years.
For more information on HP security solutions refer to: http://www.hp.com/products/security.

** Intel AT security requires a separately purchased Absolute Computrace service subscription and must be activated and configured. Check with Absolute for availability in your country. Intel and HP assume no liability for lost or stolen data and/or systems or any other damages resulting therefrom. See http://www.intel.com/technology/anti-theft/

Standard Features (availability may vary by country)

HP ProtectTools Security Manager with Central Management	HP ProtectTools Security Manager is the security platform for business notebooks and desktops. The HP ProtectTools Security Manager is an extensible client security console that delivers enhanced security capabilities through add-on software modules. The ProtectTools modules are available on the hard drive (also downloadable from the web) and can be configured in Software Setup. HP ProtectTools is centrally manageable with the capability to manage notebooks from a single point. HP ProtectTools is management ready out of the box, in partnership with Digital Persona. Features address requirements that customers expect from a centrally managed security solution such as user provisioning, credential reset, and credential revocation. HP ProtectTools provides two separate management solutions, targeted at the enterprise and the SMB: • Digital Persona Pro AD: Designed for the enterprise customer. Integrates with Active Directory and gives IT Managers the ability to provision users, create login policies based on passwords, biometrics or smartcards. Management features also include remote credential recovery in case the user forgets the password, loses the smartcard or cannot use the fingerprint reader for any reason. In addition, advanced auditing capabilities are also built in. Digital Persona Pro AD is available now. • Digital Persona Pro Workgroup: Designed for the small business customer. Provides features similar to the Active Directory version, but for workgroups. Workgroup activation is built into HP ProtectTools, and activation of up to 5 seats is completely free. For more information on Central Management for HP ProtectTools, refer to: http://www.hp.com/products/security.
Power Supply	Models with integrated graphics: External 65-watt Smart AC adapter Models with discrete graphics: External 90-watt Smart AC adapter 6-foot (1.8-meter) power cord included; total length including external AC adapter is 12 feet (3.66 meter) HP Fast Charge* * HP Fast Charge recharges your battery up to 90% within 90 minutes when the system is off. HP Fast Charge does not apply to the HP 9-cell battery.
Battery	Primary battery: HP ProBook 4430s and 4530s: HP 9-cell (93 WHr) Li-Ion battery HP 6-cell (47 WHr) Li-Ion battery HP ProBook 4730s: HP 8-cell (73 WHr) Li-Ion battery

Standard Features (availability may vary by country)

		Configurations with integrated graphics	Configurations with discrete graphics (1 GB)
Battery Life			
	HP ProBook 4430s		
	9-cell (93 WHr) battery	Up to 12 hours 45 minutes	Up to 11 hours
	6-cell (47 WHr) battery	Up to 6 hours	Up to 5 hours 45 minutes
	6-cell (55 WHr) HP Long Life Battery*	Up to 7 hours 30 minutes	Up to 6 hours 30 minutes
	HP ProBook 4530s		
	9-cell (93 WHr) battery	Up to 12 hours 45 minutes	Up to 10 hours 30 minutes
	6-cell (47 WHr) battery	Up to 6 hours 15 minutes	Up to 6 hours 15 minutes
	6-cell (55 WHr) HP Long Life Battery*	Up to 7 hours 30 minutes	Up to 7 hours 15 minutes
	HP ProBook 4730s		
	8-cell (73 Whr) battery	Not applicable	Up to 8 hours 30 minutes

* The HP Long Life Battery will carry a limited 1-year warranty.

NOTE: Battery life will vary depending on the product model, configuration, loaded applications, features, use, wireless functionality and power management settings. The maximum capacity of the battery will naturally decrease with time and usage. See MobileMark07 battery benchmark www.bapco.com/products/mobilemark2007 for additional details.

System Standby Time	Up to 1 week
Power Conservation	Supports enhanced Intel SpeedStep technology (allows Battery Optimized Mode, Maximum Performance Mode, or Automatic mode) ATI PowerPlay technology Hibernation Standby ACPI compliance
Service and Support	HP Services offers limited 1-year warranty options depending on country; 1-year limited warranty on primary battery. Warranty upgrades are also available. HP Care Pack Services extend service contracts beyond the standard warranties. To choose the right level of service for your HP product, use the HP Care Pack Services Lookup Tool at: http://www.hp.com/go/lookuptool. Additional HP Care Pack Services information by product is available at: http://www.hp.com/hps/carepack. NOTE: Certain restrictions and exclusions apply. Consult the HP Customer Support Center for details. http://h20000.www2.hp.com/bizsupport/TechSupport/ProductRoot.jsp.

Options (availability may vary by country)

Memory	HP 1 GB (DDR3 1333 MHz) SODIMM	AT911AA#xxx
	HP 2 GB (DDR3 1333 MHz) SODIMM	AT912AA#xxx
	HP 4 GB (DDR3 1333 MHz) SODIMM	AT913AA#xxx
Storage	HP 250 GB Pocket Media Drive	FE477AA
	HP Mobile USB DVD	XQ543AA
	HP Mobile USB DVDRW	BU516AA
Power	HP 90W Smart AC Adapter	ED495AA#xxx
	HP 90W Smart AC/Auto/Air Combo Adapter	AJ652AA#xxx
	HP 90W Smart Auto/Truck Adapter	ED493AA
	HP 65W Slim Adapter	AX727AA#xxx
	HP 90W Slim Adapter	BT796AA#xxx
Carrying Cases	HP Basic Carrying Case	AJ078AA
	HP Business Nylon Case	BP848AA
	HP Professional Slim Top Load Case	AY530AA
Security	HP Notebook Combo Lock	AY475AA#xxx
	HP Keyed Cable Lock	BV411AA
	HP 14.0-inch Display Privacy Filter	AU100AA#xxx
	HP 15.6-inch Display Privacy Filter	AU103AA#xxx
	HP 17.3-inch Display Privacy Filter	AU650AA#xxx
Input/Output Devices	HP USB Optical Travel Mouse	RH304AA
	HP USB/PS2 Optical 2-Button Scroll Mouse	DC369A
	HP USB Keyboard & Mouse Bundle	RC465AA#xxx
	HP Notebook Projection Companion	AX325AA#xxx

System Unit	Dimensions (HxWxD)	HP ProBook 4430s: 1.11in (at front) x 13.in x 9.26 in 2..81 cm (at front) x 33.9 cm x 23.5 cm HP ProBook 4530s: 1.13 in (at front) x 14.76 in x 10.1 in 2.87 cm (at front) x 37.4 cm x 25.6 cm HP ProBook 4730s: 1.15 in (at front) x 16.29 in x 11.00 in 2.9 cm (at front) x 41.4 cm x 27.9 cm	
	Weight	HP ProBook 4430s: Starting at 4.51 lb (2.04 kg) without optical drive or 4.85 lb (2.218 kg) with optical drive HP ProBook 4530s: Starting at 5.22 lb (2.36 kg) without optical drive or 5.55 lb (2.51 kg) with optical drive HP ProBook 4730s: Starting at 6.44 lb (2.92 kg) without optical drive or 6.72 lb (3.05 kg) with optical drive	
	NOTE: Height varies depending upon where on the notebook the measurement is made. Weight varies by configuration and components.		
	Stand-Alone Power Requirements (AC Power)	Nominal Operating Voltage	18.5 V
		Average Operating Power	with integrated graphics: TBD W with discrete graphics: TBD W
		Max Operating Power	< 90 W or < 65W
	Temperature	Operating*	32° to 95° F (0° to 35° C) (not writing optical) 41° to 95° F (5° to 35° C) (writing optical)
		Non-operating	-4° to 140° F (-20° to 60° C)
	Relative Humidity	Operating	10% to 90%, non-condensing
		Non-operating	5% to 95%, 101.6° F (38.7° C) maximum wet bulb temperature
	Shock	Operating	125 G, 2 ms, half-sine
		Non-operating	200 G, 2 ms, half-sine
	Random Vibration	Operating	0.75 grms
		Non-operating	1.50 grms
	Altitude (unpressurized)	Operating	-50 to 10,000 ft (-15.24 to 3,048 m)
		Non-operating	-50 to 40,000 ft (-15.24 to 12,192 m)
	Planned Industry Standard Certifications	UL	Yes
		CSA	Yes
		FCC Compliance	Yes
		ENERGY STAR®	Select models**

EPEAT	Registered TBD in United States***
ICES	Yes
Australia / NZ A-Tick Compliance	Yes
CCC	Yes
Japan VCCI Compliance	Yes
KCC	Yes
BSMI	Yes
CE Marking Compliance	Yes

* At temperatures above 86° F (30° C), the Intel Core i3-2310M Processor may not run at maximum clock speed.

** Configurations of the HP Probook 4430s, HP ProBook 4530s, and HP Probook 4730s that are ENERGY STAR qualified are identified as HP ProBook 4430s ENERGY STAR, HP ProBook 4530s ENERGY STAR, and HP Probook 4730s ENERGY STAR on HP websites and on www.energystar.gov.

*** EPEAT registration varies by country. See www.epeat.net for registration status by country. EPEAT status listed above applies to U.S.

NOTE: For accessibility information on HP products, please visit: http://www.hp.com/accessibility.

Audio	SRS Premium Sound	
Hardware	Implementation	IDT 92HD87 High Definition CODEC
	Touch-Sensitive Volume Controls	Volume up, volume down, and mute
	Full Duplex	Yes
	Microphone In	Stereo
	Headphone/Line Out	Stereo
	Integrated Microphone	Yes, dual digital microphone array when equipped with optional webcam
Audio Output Quality	Frequency Response	20 Hz – 20 kHz
	Signal to Noise Ratio	>85 dB
	Total Harmonic Distortion	0.01%
	Noise Floor	–110 dB
	Play/Record Sampling Rate(s)	8 kHz – 48kHz
	DAC	16, 20 or 24-bit
	ADC	16 or 20-bit

Integrated Stereo Speakers	Power Rating	2 Watts	
	Impedance	4 Ohms	
Power			
HP 90W Smart AC Adapter	Dimensions	5.00 x 1.97 x 1.1 in (12.7 x 5.0 x 2.9 cm)	
	Weight	0.82 lb (370 g)	
	Input	100 to 240 VAC	
		Input Efficiency	87% min at 115 VAC
		Input frequency range	47 to 63 Hz
		Input AC current	1.5 A at 90 VAC, 0.75 A at 180 VAC PFC Version
			2.4 A at 90 VAC, 1.2 A at 180 VAC NON PFC Version
	Output	Output power	90W
		DC output	19.0V
		Hold-up time	5 msec at 115 VAC input
		Output current limit	<11A, Over voltage protection- 29V max automatic shutdown
	Connector	3 pin/grounded, mates with interchangeable cords	
	Environmental Design	Operating temperature	32° to 104° F (0° to 40° C)
		Non-operating (storage) temperature	-4° to 149° F (-20° to 65° C)
		Altitude	0 to 10,000 ft (0 to 3,048 m)
		Humidity	20% to 80%
		Storage Humidity	10% to 90%
	EMI and Safety Certifications	CE Mark - full compliance with LVD and EMC directives; Worldwide safety standards - IEC60950, EN60950, UL60950, Class1, SELV; Agency approvals - C-UL-US, NORDICS, DENAN, EN55022 Class B, FCC Class B, CISPR22 Class B, CCC, NOM-1 NYCE; MTBF- over 200,000 hours at 25°C ambient condition.	

Technical Specifications

HP 65W Smart AC Adapter	Dimensions	4.17 x 1.85 x 1.1 in (10.6 x 4.7 x 2.8 cm)	
	Weight	0.62 lb (280 g)	
	Input	100 to 240 VAC	
		Input Efficiency	87% min at 115 VAC
		Input frequency range	47 to 63 Hz
		Input AC current	1.7 A at 90 VAC, 0.85 A at 180 VAC
	Output	Output power	65W
		DC output	18.5V
		Hold-up time	5 msec at 115 VAC input
		Output current limit	<11A, Over voltage protection- 29V max automatic shutdown
	Connector	3 pin/grounded, mates with interchangeable cords	
	Environmental Design	Operating temperature	32° to 104° F (0° to 40° C)
		Non-operating (storage) temperature	-4° to 149° F (-20° to 65° C)
		Altitude	0 to 10,000 ft (0 to 3,048 m)
		Humidity	20% to 80%
		Storage Humidity	10% to 90%
	EMI and Safety Certifications	CE Mark - full compliance with LVD and EMC directives; Worldwide safety standards - IEC60950, EN60950, UL60950, Class1, SELV; Agency approvals - C-UL-US, NORDICS, DENAN, EN55022 Class B, FCC Class B, CISPR22 Class B, CCC, NOM-1 NYCE; MTBF - over 200,000 hours at 25°C ambient condition.	

NOTE: Unless otherwise noted, temperature limits listed in the following component specifications relate to the internal temperatures of these components and not to the environment in which the PC is operating.

9-Cell (93 WHr) Lithium-Ion battery	Dimensions (H x W x L)	0.8 x 2.9 x 8.3 in (2.0 x 7.3 x 21.0 cm)	
	Weight	1.07 lb (0.488 kg)	
	Cells/Type	9-cell Lithium-Ion	
	Energy	Watt-hour Capacity	93 WHr
	Temperature	Operating (Charging)	32° to 113° F (0° to 45° C)
		Operating (Discharging)	14° to 140° F (–10° to 60° C)
		Non-operating	–4° to 140° F (–20° to 60° C)
	Battery Re-Charge Time	System in OFF mode or Standby	3 to 4 hours
		System ON	4 to 6 hours (depending on system power consumption)

8-Cell (73 Whr) Lithium-Ion Primary battery	Dimensions (HxWxL)	0.8 x 1.9 x 10.6 in (2.0 x 4.8 x 27.0 cm)	
	Weight	0.980 lb (0.445 kg)	
	Cells/Type	8-cell Lithium-Ion	
	Energy	Watt-hour Capacity	73 Wh
	Temperature	Operating (Charging)	32° to 113° F (0° to 45° C)
		Operating (Discharging)	14° to 140° F (-10° to 60° C)
		Non-operating	-4° to 140° F (-20° to 60° C)
	Battery Re-Charge Time	System in OFF mode or Standby	2.5 hours
		System ON	3 to 5 hours (depending on system power consumption)
		HP Fast Charge Technology	Charges the battery up to 90% within 1.5 hours when system is OFF
6-Cell (62 WHr) Lithium-on battery	Dimensions (HxWxL)	0.8 x 2.0 x 8.3 in (2.0 x 5.1 x 21.1 cm)	
	Weight	0.72 lb (0.325 kg)	
	Cells/Type	6-cell Lithium-Ion	
	Energy	Watt-hour Capacity	62Wh
	Temperature	Operating (Charging)	32° to 113° F (0° to 45° C)
		Operating (Discharging)	14° to 140° F (–10° to 60° C)
		Non-operating	–4° to 140° F (–20° to 60° C)
	Battery Re-Charge Time	System in OFF Mode or Standby	2.5 hours
		System ON	3 to 5 hours (depending on system power consumption)
Displays			

Technical Specifications

17.3-inch LED HD+ anti-glare	Active Area (W x H)	15.0 x 8.5 in (38.2 x 21.5 cm)	
	Diagonal Size	17.3 in (43.9 cm)	
	Surface Treatment	Anti-glare	
	Contrast Ratio	400:1 typical	
	Refresh Rate	60 Hz	
	Brightness	200 nit typical	
	Pixel Resolution	Pitch	0.23868 x 0.23868 mm
		Format	1600 x 900
		Configuration	RGB Stipe
	Backlight	LED	
	PPI	107	
	Viewing Angle	±30° Horizontal, ±10° Vertical (minimum) 30/30/20/10 (Left/Right/Down/Up) (minimum) or 45/45/35/25 (Left/Right/Down/Up) (typical)	

15.6-inch LED HD (1366 x 768) anti-glare	Dimensions (W x H)	13.54 x 7.59 in (34.4 x 19.4 cm)	
	Diagonal Size	15.6 in (39.6cm)	
	Surface Treatment	Anti-glare	
	Contrast Ratio	400:1 (min)	
	Refresh Rate	60 Hz	
	Brightness	210 nit (typical)	
	Pixel Resolution	Pitch	0.252 mm
		Format	1366 x 768
		Configuration	RGB Stripe
	Backlight	LED	
	PPI	101 ppi	
	Viewing Angle	±30° Horizontal, ±10° Vertical (minimum) 30/30/20/10 (Left/Right/Down/Up) (minimum) or 45/45/35/25 (Left/Right/Down/Up) (typical)	

Technical Specifications

14.0-inch LED HD (1366 x 768) anti-glare	Active Area (W x H)	12.74 x 7.56 in (32.4 x 19.2 cm)	
	Diagonal Size	14.0 in (35.6cm)	
	Surface Treatment	Anti-glare	
	Contrast Ratio	400:1 (typical)	
	Refresh Rate	60 Hz	
	Brightness	200 nit (typical)	
	Pixel Resolution	Pitch	0.227 mm
		Format	1366 x 768
		Configuration	RGB Stripe
	Backlight	LED	
	PPI	112 ppi	
	Viewing Angle	±30° Horizontal, ±10° Vertical (minimum) 30/30/20/10 (Left/Right/Down/Up) (minimum) or 45/45/35/25 (Left/Right/Down/Up) (typical)	

Internal Storage

500 GB 7200 rpm SATA Hard Drive	Drive Weight	0.25 lbs (115g)	
	Capacity	500 GB	
	Height	0.37 in (9.5 mm)	
	Width	2.75 in (70 mm)	
	Interface	ATA-8, SATA 2.6, 3.0 Gb/s, NCQ	
	Transfer Rate	Synchronous (maximum)	300 MB/s (Drive Capability)
	Seek Time (typical reads, including settling)	Single Track	1.5 ms
		Average	11 ms
		Maximum	22 ms
	Rotational Speed	7200 rpm	
	Logical Blocks	976,773,168	
	Operating Temperature	32° to 140° F (0° to 60° C) [case temp]	
	Features	ATA Security	

Technical Specifications

320 GB 7200 rpm SATA Hard Drive	Drive Weight	0.25 lbs (115 g)	
	Capacity	320 GB	
	Height	0.37 in (9.5 mm)	
	Width	2.75 in (70 mm)	
	Interface	ATA-8, SATA 2.6, 3.0 Gb/s, NCQ	
	Transfer Rate	Synchronous (maximum)	300 MB/s (Drive Capability)
	Seek Time (typical reads, including settling)	Single Track	1.5 ms
		Average	11 ms
		Maximum	22 ms
	Rotational Speed	7200 rpm	
	Logical Blocks	625,142,448	
	Operating Temperature	32° to 140° F (0° to 60° C) [case temp]	
	Features	ATA Security	

750 GB 5400 rpm SATA Hard Drive	Drive Weight	0.27 lb (125 g) or 0.22 lb (101 g)	
	Capacity	750 GB	
	Height	0.50 in (12.7 mm) or 0.37 in (9.5 mm)	
	Width	2.75 in (70 mm)	
	Interface	ATA-8, SATA 2.6, 3.0 Gb/s, NCQ	
	Transfer Rate	Synchronous (maximum)	300 MB/s (Drive Capability)
	Seek Time (typical reads, including settling)	Single Track	3 ms
		Average	13 ms
		Maximum	24 ms
	Rotational Speed	5400 rpm	
	Logical Blocks	1,465,149,168	
	Operating Temperature	32° to 140° F (0° to 60° C) [case temp]	
	Features	ATA Security	

320 GB 5400 rpm SATA Hard Drive	Drive Weight	0.22 lb (101 g)	
	Capacity	320 GB	
	Height	0.37 in (9.5 mm)	
	Width	2.75 in (70 mm)	
	Interface	ATA-8, SATA 2.6, 3.0 Gb/s, NCQ	
	Transfer Rate	Synchronous (maximum)	300 MB/s (Drive Capability)
	Seek Time (typical reads, including settling)	Single Track	3 ms
		Average	13 ms
		Maximum	24 ms
	Rotational Speed	5400 rpm	
	Logical Blocks	625,142,448	
	Operating Temperature	32° to 140° F (0° to 60° C) [case temp]	
	Features	ATA Security	

Optical Drives

DVD-ROM Drive (4530s only)	Access Times	Random	< 140 ms CD (typical)
			< 160 ms DVD (typical)
	Max Data Transfer Rate	24X CD-ROM	
		8X-DVD	
	Transfer Mode	UDMA Mode 5	
	Interface	Gen 1 SATA	
	Supported Media (read)	CD-DA, CD-TEXT, CD-ROM, CD-ROM XA, MIXED MODE CD, CD-I, CD-I Bridge (Photo-CD, Video CD), Multisession CD (Photo-CD, CD-EXTRA, Portfolio, CD-R, CD-RW), CD-R, CD-RW, DVD-ROM (DVD-5, DVD-9, DVD-10, DVD-18), DVD-R, DVD-RW, DVD+R, DVD+RW, DVD-RAM	
	Supported Media (write)	None	
	Max Media Capacity (read)	8.5GB	
	Transport	Tray Loading	

DVD+/-RW SuperMulti DL Drive	Access Times	Random	<140ms CD (typical) < 160 ms DVD (typical)
	Max Data Transfer Rate	24X CD-ROM 8X DVD 24X CD-R 24X CD-RW 8X DVD+R 8X DVD+RW 8X DVD-R 6X DVD-RW 6X - DVD+R Dual Layer 6X - DVD-R Dual Layer 5X DVD-RAM	
	Transfer Mode	UDMA Mode 5	
	Interface	Gen 1 SATA	
	Supported Media (read)	CD-DA, CD-TEXT, CD-ROM, CD-ROM XA, MIXED MODE CD, CD-I, CD-I Bridge (Photo-CD, Video CD), Multisession CD (Photo-CD, CD-EXTRA, Portfolio, CD-R, CD-RW), CD-R, CD-RW, DVD-ROM (DVD-5, DVD-9, DVD-10, DVD-18), DVD-R, DVD-RW, DVD+R, DVD+RW, DVD-RAM	
	Supported Media (write)	CD-R, CD-RW, DVD+R, DVD+RW, DVD-R, DVD-RW, DVD-RAM, DVD+R DL, DVD-R DL	
	Max Media Capacity (read)	8.5 GB	
	Max Media Capacity (write)	8.5 GB	
	Transport	Tray Loading	

Blu-ray R/RE DVD+/-RW SuperMulti DL Drive	Access Times	Random	<165 ms CD-ROM (typical) <185 ms DVD-ROM (typical) <205 ms BD-ROM (typical)
	Max Data Transfer Rate	24X CD-ROM 8X DVD-ROM 24X CD-R 16X CD-RW 8X DVD+R 8X DVD+RW 8X DVD-R 6X DVD-RW 6X DVD+R Dual Layer 6X DVD-R Dual Layer 5X DVD-RAM 6X BD-ROM	

		6X BD-R
		2X BD-RE
	Transfer Mode	UDMA Mode 5
	Interface	Gen 1 SATA
	Supported Media (read)	CD-DA, , CD-TEXT, CD-ROM, CD-ROM XA, MIXED MODE CD, CD-I, CD-I Bridge (Photo-CD, Video CD), Multisession CD (Photo-CD, CD-EXTRA, Portfolio, CD-R, CD-RW), CD-R, CD-RW, DVD-ROM (DVD-5, DVD-9, DVD-10, DVD-18), DVD-R, DVD-RW, DVD+R, DVD+RW. DVD-RAM, BD-ROM, BD-R, BD-RE
	Supported Media (write)	CD-R, CD-RW, DVD+R, DVD+R DL, DVD+RW, DVD-R, DVD-R DL, DVD-RW, DVD-RAM, BD-R, BD-RE
	Max Media Capacity (read)	50.0 GB
	Max Media Capacity (write)	50.0 GB
	Transport	Tray Loading

Security

HP Fingerprint Sensor	Mobile Voltage Operation	3.0V-3.6V Single Supply
	Operating Temperature	32° – 158°F (0° – 70°C)
	Current Consumption @ 3.3V	Less than 70 mA peak imaging and scrolling Less than 25 mA hardware finger detection Advanced Power Management
	High-Rate Image Capture	Up to 240 image frames /sec
	ESD Resistance	IEC 61000-4-2 Level 4 (±15KV)
	Detection Matrix	192 x 16 Pixels 9.7 mm x 0.81 mm 500 ppi High-Resolution Images

Communications

Integrated Realtek RTL8153EH-CG 10/100/1000 NIC	Ethernet Features	10 Mbit/s operation (10BASE-T; IEEE 802.3i; IEEE 802.3 clauses 13-14) 100 Mbit/s operation (100BASE-TX; IEEE 802.3u; IEEE 802.3 clauses 21-30) 1000 Mbit/s operation (1000BASE-T; IEEE 802.3ab; IEEE 8023 clauses 40) Auto-Negotiation (Automatic Speed Selection) Full Duplex Operation at all Speeds, Half Duplex operation at 10 and 100 Mbit/s IEEE 802.1p QoS (Quality of Service) Support IEEE 802.1q VLAN support IEEE 802.3x Flow Control (IEEE 802.3 clauses 31-32; configurable) IEEE 802.3az EEE (Energy Efficient Ethernet) Jumbo Frame 9K Auto MDI/MDIX Crossover cable detection
	Power Management	ACPI compliant - multiple power modes Situation-sensitive features reduce power consumption Advanced link down power saving for reducing link down power consumption
	Performance Features	TCP/IP/UDP Checksum Offload (configurable) Protocol Offload (ARP & NS) Large send offload and Giant send offload Receiving Side Scaling
	Manageability	Wake-on-LAN from standby and hibernation (Magic Packet and Microsoft Wake-Up Frame); Wake-on-LAN from off (Magic Packet only) PXE 2.1 Remote Boot Statistics Gathering (SNMP MIB II, Ethernet-like MIB, Ethernet MIB (802.3x, clause 30)) Comprehensive diagnostic and configuration software suite Virtual Cable Doctor for Ethernet cable status
	Interface	PCI Express 1.1 x1 to fully support ASPM L0s/L1 and CLKREQ
	NIC Device Driver Name	Realtek PCIe GBE Ethernet Family Controller

V.92 56K Data/Fax Modem	Form Factor	MDC 1.5 Daughtercard
	Power Management Support	APM Revision 1.2, ACPI
	Approvals/ Certifications	UL, CSA, NEMKO, CCIB, Industry Canada, FCC Part 68, CTR21, FCC Part 15 Class B, Canadian ICES-003 Class B, C.I.S.P.R.22, Australian ACA, CE Mark, Other Countries
	Data Mode Capabilities	V.92 data V.8bis V.80 V44, V.42bis, MNP5 (Compression) V.42 (LAPM, MNP2-4) (Error Correction) Optional symbol rates: 2800, 3429 Asymmetric Symbol rates Synchronous primary channel data signaling rates: 3600, 31200

		Automatic rate re-negotiation V.34 V.32bis V.32 V.23 V.22bis V.22 V.21 Bell 212A Bell 103J
	Fax Mode Capabilities	TIA/EIA-578-B (Class 1) T.30, T.4 (Group 3) V.17 V.29 V.27ter V.21 Channel 2 T.31
	Command Set	V.250 (Partial) TIA-602 Identification: +GMI, +GMM, +GMR Port control: +IPR, +ICF, +IFC, +ILRR Modulation: +MS, +MR, +MA Error control: +ES, +ER, +EB, +ESR, +ETBM Data compression: +DS, +DR V.251
HP un2430 EV-DO/HSPA Mobile Broadband Module	Technology/Operating Bands	GSM/GPRS/EDGE: 850MHz(Cell), 900MHz(EGSM), 1800MHz(DCS), 1900MHz (PCS) UMTS/WCDMA with receive diversity: 2100MHz (UTRA FDD Band I), 1900MHz (UTRA FDD Band II), AWS (UTRA FDD Band IV), 900MHz(UTRA FDD Band VIII), 850MHz (UTRA FDD Band V) 1xEVDO/1xRTT with receive diversity: 850MHz (Band Class0-Cell), 1900MHz (Band Class1-PCS)
	Wireless Protocol Standards	GSM/GPRS/EDGE: Class A, Multi-slot class 10 operation, coding schemes CS1 - CS4 and MSC1 - MSC9. UMTS/WCDMA: Release 99 and Release 6 CDMA: 1xEVDO Release 0 and Release A, IS-95A, IS-95B, IS-856, IS-2000
	Wireless Parametric Standards	Meets or exceeds TIA/EIA IS-98-D
	Maximum Data Rates	UMTS (HSPA) - 14.4 Mbps (Download), 5.76Mbps (Upload) CDMA (EVDO Release A) - 3.1 Mbps (Download), 1.8Mbps (Upload)
	GPS	Standalone GPS enabled gpsOneXTRATM™
	GPS Bands	L1 - 1575.42 MHz
	Maximum Output Power	GSM/GPRS/EDGE: 32dBm (+/-1) WCDMA: 24dBm (+0.7/-2.3) CDMA: 24dBm (+0.7/-2)

	Maximum Power Consumption	2750mA (peak); 1100mA (average)
	Power Consumption, Idle Not Connected	20 mA
	Power Management	USB selective suspend Integrated notebook wireless button
	Antenna Type	Dual high efficiency 5 band antennae with spatial diversity, mounted in the display enclosure
	Form Factor	PCI-Express MiniCard, USB 2.0 interface
	Weight	11.5 g
	Dimensions (Length x Width x Thickness)	2.01 x 1.18 x 0.18 in (51 x 30 x 5 mm)
	Voltage, Operating	3.3v +/- 10%
	Temperature, Operating (from TIA/EIA/IS-98-D)	-22° to 158° F (-30° to 70° C) (full RF performance) -22° to 167° F (-30° to 75° C) (reduced RF performance)
	Temperature, Non-operating, 96 hours (from MIL-STD 202 Method 108)	-40° to 185° F (-40° to 85° C)
	Humidity, Non-operating	95% relative humidity for 48 hours @ 185° F (85° C) (non-condensing)
	Configuration Utilities	HP Connection Manager
	LED Activity	LED Off - Radio Off; Solid LED On - Radio On
Intel Centrino Advanced-N 6230 WiFi and Bluetooth Combo Adapter	Wireless LAN Standards	IEEE 802.11a IEEE 802.11b IEEE 802.11g IEEE 802.11n
	Interoperability	Wi-Fi certified Cisco Compatible Extensions Program compliantwith Microsoft Windows Vista and XP (details at: http://www.hp.com/go/notebooks/WLAN)
	Frequency Band	2.4 GHz and 5GHz
	Data Rates	802.11a: 6, 9, 12, 18, 24, 36, 48, 54 Mbps 802.11b: 1, 2, 5.5, 11 Mbps 802.11g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps 802.11n: 66 possible data rates, ranging from 6 Mbps to 300 Mbps, depending on the combination of Bandwidth, Modulation Coding Scheme, and Guard Interval used, as defined in IEEE 802.11n specification
	Modulation	Direct Sequence Spread Spectrum DBPSK, DQPSK, CCK, OFDM, BPSK, QPSK, 16-QAM, 64-QAM
	Security[1]	Supports 64- and 128-bit WEP, WPA, WPA2, hardware-accelerated AES, 802.1x authentication types EAP-TLS, EAP-TTLS, PEAP-GTC, PEAP-MSCHAPv2, LEAP, EAP-FAST. Support for Cisco Security Features (proven compatibility with Cisco Aironet infrastructure products through the Cisco Compatible Extensions Program

	Version 4) with Microsoft Windows Vista and XP only.	
Sub-channels	Multinational support with frequency bands and channels compliant to local regulations.	
Media Access Protocol	CSMA/CA (Collision Avoidance) with ACK	
Network Architecture Models	Ad-hoc (Peer to Peer) Infrastructure (Access Point Required)	
Roaming	IEEE 802.11 compliant roaming between access points	
Output Power (for CCK and OFDM)[2]	17 dBm , nominal	
Output Power (for OFDM; power varies by data rate)[2]	15 dBm , nominal	
Power Consumption	Idle associated: 250 mW Idle unassociated: 150 mW Transmit: 2.0 W (max) Receive: 2.0 W (max)	
Power Management	ACPI compliant power management 802.11 compliant power saving mode	
Receiver Sensitivity[3]	54 Mbps: -71 dBm, 11 Mbps: -85 dBm , 1 Mbps: -95 dBm	
Antenna type	High efficiency dual band antenna with spatial diversity, mounted in the display enclosure	
Form Factor	PCI-Express Half-MiniCard	
Weight	0.013 lb (6 g)	
Dimensions	0.19 x 1.06 x 1.18 in (4.75 x 26.8 x 30 mm)	
Operating Voltage	3.3v +/- 10%	
Temperature	Operating Non-operating	14° to 149° F (-10° to 65° C) -40° to 176° F (-40° to 80° C)
Humidity	Operating Non-operating	10% to 90% (non-condensing) 5% to 95% (non-condensing)
Altitude	Operating Non-operating	0 to 10,000 ft (3,048 m) 0 to 50,000 ft (15,240 m)
Configuration Utility[4]	Microsoft Windows XP Choice of Configuration Utility: • Microsoft Windows XP Wireless Network Connection Manager • Broadcom Wireless Configuration Utility (required for Cisco Compatible Extensions support) Microsoft Windows Vista • Microsoft Windows Vista Wireless Network Connection Manager • Broadcom IHV extensions for Windows Vista available to support Cisco Compatible Extensions.	
LED Activity	LED Off - Radio OFF; Solid LED On - Radio ON	

1. Check latest software/driver release for updates on supported security features.
2. Maximum output power may vary by country according to local regulations.
3. Receiver sensitivity is measured at a packet error rate of 8% for 802.11b (CCK modulation) and a

packet error rate of 10% for 802.11a/g (OFDM modulation).

4. WLAN supplier's client utility is required for Cisco Compatible Extensions support with Microsoft Windows XP. WLAN may also be compatible with certain third-party software supplicants. WLAN supplier IHV extensions required for Cisco Compatible Extensions support for Microsoft Windows Vista.

Bluetooth 2.1 and 3.0 Wireless Technology	Bluetooth Specification	2.1+EDR and 3.0+HS Compliant
	Dimensions	1.18 x 0.26 x 0.13 in (30 x 6.5 x 3.25 mm)
	Frequency Band	2402 to 2480 MHz
	Number of Available Channels	79 (1 MHz) available channels
	Data Rates and Throughput	3 Mbps data rate; throughput up to 2.17 Mbps Synchronous Connection Oriented links up to 3, 64 kbps, voice channels Asynchronous Connection Less links 2178.1 kbps/177.1 kbps asymmetric or 1306.9 kbps symmetric
	Transmit Power	Max 5.5 dBm (Bluetooth Class I)
	Receiver Sensitivity	Better than -80 dBM at 0.1 % raw bit error rate
	Power Consumption	Average 165mW Sleep <1 mW
	Antenna	Internally integrated within module
	Range	Up 33 ft (10 m)
	Electrical Interface	USB 2.0 compliant Microsoft Windows Plug and Play compliant
	Bluetooth Software Supported	Broadcom Bluetooth for Windows Microsoft Windows Bluetooth Software
	Link Topology	Point to Point, Multipoint Pico Nets up to 7 slaves
	Security	Full support of Bluetooth Security Provisions
	Power Management	Microsoft Windows ACPI, and USB Bus Support Self configurable to optimize power conservation in all operating modes, including Standby, Hold, Park, and Sniff
	Certifications	All necessary regulatory approvals for supported countries, including: FCC (47 CFR) Part 15C, Section 15.247 & 15.249 ETS 300 328, ETS 300 826 Low Voltage Directive IEC950 UL, CSA, and CE Mark
	Temperature	Operating: -4° to 158° F (-20° to 70° C) Non-operating: -40° to 176° F (-40° to 80° C)
	Humidity	Operating: 10% to 90% Non-operating: 5% to 95%
	Altitude	Operating: 15,000 ft (4,572 m) Non-operating: 40,000 ft (12,192 m)
	Bluetooth Profiles Supported	Serial Port Profile (SPP)[1] Service Discovery Applicaton Profile (SDAP) Dial-Up Networking (DUN)[1,2]

Generic Object Exchange Profile (GOEP)[1,2]
Object Push Profile (OPP)[1,2]
File Transfer Profile (FTP)
Synchronization Profile (SYNC)
Hard Copy Cable Replacement (HCRP)[1,2]
Personal Area Networking Profile (PAN)[1,2]
Human Interface Device Profile (HID)[1,2,3]
FAX Profile (FAX)
Basic Imaging Profile (BIP)[2]
Headset Profile (HSP)
Hands Free Profile (HFP)
Advanced Audio Distribution Profile (A2DP)

1. indicates the profile is supported by Microsoft Windows XP SP2
2. indicates the profile is part of Windows Vista

Atheros 9285GN 802.11b/g/n + BT 3.0 HS Combo Adapter	Wireless LAN Standards	IEEE 802.11b IEEE 802.11g IEEE 802.11n
	Interoperability	Wi-Fi certified
	Frequency Band	2.4 GHz
	Data Rates	802.11b: 1, 2, 5.5, 11 Mbps 802.11g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps 802.11n: many possible data rates, ranging from 6 Mbps to 300 Mbps, depending on the combination of Bandwidth, Modulation Coding Scheme, and Guard Interval used, as defined in IEEE 802.11n specification
	Modulation	Direct Sequence Spread Spectrum DBPSK, DQPSK, CCK, OFDM, BPSK, QPSK, 16-QAM, 64-QAM
	Security[1]	Supports 64- and 128-bit WEP, WPA, WPA2, hardware-accelerated AES, 802.1x authentication types EAP-TLS, EAP-TTLS, PEAP-GTC, PEAP-MSCHAPv2, LEAP, EAP-FAST.
	Sub-channels	Multinational support with frequency bands and channels compliant to local regulations.
	Media Access Protocol	CSMA/CA (Collision Avoidance) with ACK
	Network Architecture Models	Ad-hoc (Peer to Peer) Infrastructure (Access Point Required)
	Roaming	IEEE 802.11 compliant roaming between access points
	Output Power (for CCK and OFDM)[2]	17 dBm, nominal
	Output Power (for OFDM; power varies by data rate)[2]	15 dBm, nominal

Power Consumption	Transmit: 1.5 W (max) Receive: 1.0 W (max) Associated to Access Point, Idle: 300 mW nominal Wireless Button Off: 75 mW nominal	
Power Management	ACPI compliant power management 802.11 compliant power saving mode	
Receiver Sensitivity[3]	54 Mbps: -75 dBm, 11 Mbps: -88 dBm , 1 Mbps: -93 dBm	
Antenna type	High efficiency antenna with spatial diversity, mounted in the display enclosure	
Form Factor	PCI-Express Half-MiniCard	
Weight	0.013 lb (6 g)	
Dimensions	0.19 x 1.06 x 1.18 in (4.75 x 26.8 x 30 mm)	
Operating Voltage	3.3v +/- 9%	
Temperature	Operating Non-operating	14° to 149° F (-10° to 65° C) -40° to 176° F (-40° to 80° C)
Humidity	Operating Non-operating	10% to 90% (non-condensing) 5% to 95% (non-condensing)
Altitude	Operating Non-operating	0 to 10,000 ft (3,048 m) 0 to 50,000 ft (15,240 m)
LED Activity	LED Off - Radio OFF; Solid LED On - Radio ON	

1. Check latest software/driver release for updates on supported security features.
2. Maximum output power may vary by country according to local regulations.
3. Receiver sensitivity is measured at a packet error rate of 8% for 802.11b (CKK modulation) and a packet error rate of 10% for 802.11a/g (OFDM modulation).

Ralink 3592BC8 802.11a/b/g/n 2x2 WiFi and Bluetooth 3.0+HS Combo Adapter	**Wireless LAN Standards**	IEEE 802.11a IEEE 802.11b IEEE 802.11g IEEE 802.11n
	Interoperability	Wi-Fi certified Cisco Compatible Extensions Program compliantwith Microsoft Windows Vista and XP (details at: http://www.hp.com/go/notebooks/WLAN)
	Frequency Band	2.4 GHz and 5GHz
	Data Rates	802.11a: 6, 9, 12, 18, 24, 36, 48, 54 Mbps 802.11b: 1, 2, 5.5, 11 Mbps 802.11g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps 802.11n: from 6 Mbps to 300 Mbps, depending on the combination of Bandwidth, Modulation Coding Scheme, and Guard Interval used, as defined in IEEE 802.11n specification
	Modulation	Direct Sequence Spread Spectrum DBPSK, DQPSK, CCK, OFDM, BPSK, QPSK, 16-QAM, 64-QAM
	Security[1]	Supports 64- and 128-bit WEP, WPA, WPA2, hardware-accelerated AES, 802.1x authentication types EAP-TLS, EAP-TTLS, PEAP-GTC, PEAP-MSCHAPv2, LEAP, EAP-FAST. Support for Cisco Security Features (proven compatibility with Cisco Aironet

	infrastructure products through the Cisco Compatible Extensions Program Version 4) with Microsoft Windows Vista and XP only.	
Sub-channels	Multinational support with frequency bands and channels compliant to local regulations.	
Media Access Protocol	CSMA/CA (Collision Avoidance) with ACK	
Network Architecture Models	Ad-hoc (Peer to Peer) Infrastructure (Access Point Required)	
Roaming	IEEE 802.11 compliant roaming between access points	
Output Power (for CCK and OFDM)[2]	17 dBm , nominal	
Output Power (for OFDM; power varies by data rate)[2]	15 dBm , nominal	
Power Consumption	Idle associated: 250 mW Idle unassociated: 150 mW Transmit: 2.0 W (max) Receive: 2.0 W (max)	
Power Management	ACPI compliant power management 802.11 compliant power saving mode	
Receiver Sensitivity[3]	54 Mbps: -71 dBm, 11 Mbps: -85 dBm , 1 Mbps: -95 dBm	
Antenna type	High efficiency dual band antenna with spatial diversity, mounted in the display enclosure	
Form Factor	PCI-Express Half-MiniCard	
Weight	0.013 lb (6 g)	
Dimensions	0.19 x 1.06 x 1.18 in (4.75 x 26.8 x 30 mm)	
Operating Voltage	3.3v +/- 10%	
Temperature	Operating Non-operating	14° to 149° F (-10° to 65° C) -40° to 176° F (-40° to 80° C)
Humidity	Operating Non-operating	10% to 90% (non-condensing) 5% to 95% (non-condensing)
Altitude	Operating Non-operating	0 to 10,000 ft (3,048 m) 0 to 50,000 ft (15,240 m)
Configuration Utility[4]	Microsoft Windows XP Choice of Configuration Utility: • Microsoft Windows XP Wireless Network Connection Manager • Broadcom Wireless Configuration Utility (required for Cisco Compatible Extensions support) Microsoft Windows Vista • Microsoft Windows Vista Wireless Network Connection Manager • Broadcom IHV extensions for Windows Vista available to support Cisco Compatible Extensions.	
LED Activity	LED Off - Radio OFF; Solid LED On - Radio ON	

1. Check latest software/driver release for updates on supported security features.
2. Maximum output power may vary by country according to local regulations.

3. Receiver sensitivity is measured at a packet error rate of 8% for 802.11b (CCK modulation) and a packet error rate of 10% for 802.11a/g (OFDM modulation).
4. WLAN supplier's client utility is required for Cisco Compatible Extensions support with Microsoft Windows XP. WLAN may also be compatible with certain third-party software supplicants. WLAN supplier IHV extensions required for Cisco Compatible Extensions support for Microsoft Windows Vista.

Bluetooth 2.1 and 3.0 Wireless Technology	Bluetooth Specification	2.1+EDR and 3.0+HS Compliant
	Dimensions	1.18 x 0.26 x 0.13 in (30 x 6.5 x 3.25 mm)
	Frequency Band	2402 to 2480 MHz
	Number of Available Channels	79 (1 MHz) available channels
	Data Rates and Throughput	3 Mbps data rate; throughput up to 2.17 Mbps Synchronous Connection Oriented links up to 3, 64 kbps, voice channels Asynchronous Connection Less links 2178.1 kbps/177.1 kbps asymmetric or 1306.9 kbps symmetric
	Transmit Power	-6 dBm to 4 dBm (Bluetooth Class II)
	Receiver Sensitivity	Better than -80 dBM at 0.1 % raw bit error rate
	Power Consumption	Peak (Tx) 175 mW Peak (Rx) 160 mW Sleep <1 mW
	Antenna	Internally integrated within module
	Range	Up 33 ft (10 m)
	Electrical Interface	USB 2.0 compliant Microsoft Windows Plug and Play compliant
	Bluetooth Software Supported	Broadcom Bluetooth for Windows Microsoft Windows Bluetooth Software
	Link Topology	Point to Point, Multipoint Pico Nets up to 7 slaves
	Security	Full support of Bluetooth Security Provisions
	Power Management	Microsoft Windows ACPI, and USB Bus Support Self configurable to optimize power conservation in all operating modes, including Standby, Hold, Park, and Sniff
	Certifications	All necessary regulatory approvals for supported countries, including: FCC (47 CFR) Part 15C, Section 15.247 & 15.249 ETS 300 328, ETS 300 826 Low Voltage Directive IEC950 UL, CSA, and CE Mark
	Temperature	Operating: -4° to 158° F (-20° to 70° C) Non-operating: -40° to 176° F (-40° to 80° C)
	Humidity	Operating: 10% to 90% Non-operating: 5% to 95%
	Altitude	Operating: 15,000 ft (4,572 m) Non-operating: 40,000 ft (12,192 m)
	Bluetooth Profiles Supported	Serial Port Profile (SPP)[1] Service Discovery Applicaton Profile (SDAP)

Dial-Up Networking (DUN)[1,2]
Generic Object Exchange Profile (GOEP)[1,2]
Object Push Profile (OPP)[1,2]
File Transfer Profile (FTP)
Synchronization Profile (SYNC)
Hard Copy Cable Replacement (HCRP)[1,2]
Personal Area Networking Profile (PAN)[1,2]
Human Interface Device Profile (HID)[1,2,3]
FAX Profile (FAX)
Basic Imaging Profile (BIP)[2]
Headset Profile (HSP)
Hands Free Profile (HFP)
Advanced Audio Distribution Profile (A2DP)

1. indicates the profile is supported by Microsoft Windows XP SP2
2. indicates the profile is part of Windows Vista

Realtek 8188GN 802.11b/g/n 1x1 WiFi Adapter	Wireless LAN Standards	IEEE 802.11b IEEE 802.11g IEEE 802.11n
	Interoperability	Wi-Fi certified
	Frequency Band	2.4 GHz
	Data Rates	802.11b: 1, 2, 5.5, 11 Mbps 802.11g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps 802.11n: many possible data rates, ranging from 6 Mbps to 150 Mbps, depending on the combination of Bandwidth, Modulation Coding Scheme, and Guard Interval used, as defined in IEEE 802.11n specification
	Modulation	Direct Sequence Spread Spectrum DBPSK, DQPSK, CCK, OFDM, BPSK, QPSK, 16-QAM, 64-QAM
	Security[1]	Supports 64- and 128-bit WEP, WPA, WPA2, hardware-accelerated AES, 802.1x authentication types EAP-TLS, EAP-TTLS, PEAP-GTC, PEAP-MSCHAPv2, LEAP, EAP-FAST.
	Sub-channels	Multinational support with frequency bands and channels compliant to local regulations.
	Media Access Protocol	CSMA/CA (Collision Avoidance) with ACK
	Network Architecture Models	Ad-hoc (Peer to Peer) Infrastructure (Access Point Required)
	Roaming	IEEE 802.11 compliant roaming between access points
	Output Power (for CCK)[2]	17 dBm, nominal
	Output Power (for OFDM; power varies by data rate)[2]	15 dBm, nominal

Power Consumption	Transmit: 1.5 W (max) Receive: 1.0 W (max) Associated to Access Point, Idle: 152 mW nominal Wireless Button Off: 33 mW nominal	
Power Management	ACPI compliant power management 802.11 compliant power saving mode	
Receiver Sensitivity[3]	54 Mbps: -73 dBm, 11 Mbps: -82 dBm , 1 Mbps: -93 dBm, MCS7_HT20: -69dBm , MCS7_HT40: -67dBm	
Antenna type	High efficiency antenna with spatial diversity, mounted in the display enclosure	
Form Factor	PCI-Express Half-MiniCard	
Weight	0.007 lb (3 g)	
Dimensions	0.14 x 1.06 x 1.18 in (3.5 x 26.8 x 30 mm)	
Operating Voltage	3.3v +/- 9%	
Temperature	Operating Non-operating	14° to 149° F (-10° to 65° C) -40° to 176° F (-40° to 80° C)
Humidity	Operating Non-operating	10% to 90% (non-condensing) 5% to 95% (non-condensing)
Altitude	Operating Non-operating	0 to 10,000 ft (3,048 m) 0 to 50,000 ft (15,240 m)
LED Activity	LED Off - Radio OFF; Solid LED On - Radio ON	

1. Check latest software/driver release for updates on supported security features.
2. Maximum output power may vary by country according to local regulations.
3. Receiver sensitivity is measured at a packet error rate of 8% for 802.11b (CKK modulation) and a packet error rate of 10% for 802.11a/g/n (OFDM modulation).

Environmental Data

Eco-Label Certifications

This product has received or is in the process of being certified to the following approvals and may be labeled with one or more of these marks:

- US ENERGY STAR®
- IT ECO declaration
- EPEAT - Gold where HP registers commercial notebook products. See http://www.epeat.net for registration status in your country.

System Configuration

The configuration used for the Energy Consumption and Declared Noise Emissions data for the Convertible Mini tower Desktop model is based on a "Typically Configured Notebook"

HP ProBook 4430s Notebook PC

Energy Consumption	115 VAC	230 VAC	100 VAC
Normal Operation	9.75W	10.19 W	10.32 W
Sleep (Energy Star low power mode)	1.24 W	1.4 W	1.24 W
Off	0.57 W	0.66 W	0.56 W

Heat Dissipation*	115 VAC	230 VAC	100 VAC
Normal Operation	33 BTU/hr	35 BTU/hr	35 BTU/hr
Sleep	4 BTU/hr	5 BTU/hr	4 BTU/hr
Off	2 BTU/hr	2 BTU/hr	2 BTU/hr

* Heat dissipation is calculated based on the measured watts, assuming the service level is attained for one hour.

Declared Noise Emissions (in accordance with ISO 7779 and ISO 9296)

System Fan Off	Sound Power (LWAd, bels)	Sound Pressure (LpAm, decibels)
Idle	3.5	32.2
Fixed Disk (random writes)	3.8	35.4

System fan is usually off except when charging the battery

Batteries

This battery(s) in this product comply with EU Directive 2006/66/EC

Batteries used in the product do not contain:

- Mercury greater the 5ppm by weight
- Cadmium greater than 10ppm by weight

The battery type and chemistry used in the product is:
CR2032 (coin cell), Li-ion
6-cell high capacity Lithium-Ion battery (optional 8 cell available)

Additional information

This product is in compliance with the Restrictions of Hazardous Substances (RoHS) directive - 2002/95/EC.

This HP product is designed to comply with the Waste Electrical and Electronic Equipment (WEEE) Directive - 2002/96/EC.

This product is in compliance with California Proposition 65 (State of California; Safe Drinking Water and Toxic Enforcement Act of 1986).

This product is in compliance with the IEEE 1680 (EPEAT) standard at the Gold level, see www.epeat.net

Plastics parts weighing over 25 grams used in the product are marked per ISO 11469 and ISO1043.

This product contains 0% post consumer recycled plastic (by wt.)

This product is greater than 94.4% recycle-able when properly disposed of at end of life.

Packaging Materials

- External:
  - Corrugated Carton 385 g
  - Corrugated 115 g
  - CANON bags - Several layers 5 g
- Internal:
  - Polyethylene low density 15 g
  - Molded Pulp 180 g
- The Corrugated Carton packaging material is made from 80% recycled content.
- The Corrugated packaging material is made from 80% recycled content.
- The CANON bags - Several layers packaging material is made from 80% recycled content.
- The Polyethylene low density packaging material is made from 60% recycled content.
- The Molded Pulp packaging material is made from 60% recycled content.

HP follows these guidelines to decrease the environmental impact of product packaging:

- Eliminate the use of heavy metals such as lead, chromium, mercury and cadmium in packaging materials.
- Eliminate the use of ozone-depleting substances (ODS) in packaging materials.
- Design packaging materials for ease of disassembly.
- Maximize the use of post-consumer recycled content materials in packaging materials.
- Use readily recyclable packaging materials such as paper and corrugated materials.
- Reduce size and weight of packages to improve transportation fuel efficiency.
- Plastic packaging materials are marked according to ISO 11469 and DIN 6120 standards.

HP ProBook 4530s Notebook PC

Energy Consumption	115 VAC	230 VAC	100 VAC
Normal Operation	9.29 W	10.44 W	9.23 W
Sleep (Energy Star low power mode)	1.18 W	1.08 W	1.16 W
Off	0.51 W	0.64 W	0.51 W

Heat Dissipation*	115 VAC	230 VAC	100 VAC
Normal Operation	31.7 BTU/hr	35.7 BTU/hr	31.5 BTU/hr
Sleep	4.03 BTU/hr	4 BTU/hr	4 BTU/hr
Off	2 BTU/hr	2.1 BTU/hr	2 BTU/hr

* Heat dissipation is calculated based on the measured watts, assuming the service level is attained for one hour.

Declared Noise Emissions (in accordance with ISO 7779 and ISO 9296)

System Fan Off	Sound Power (LWAd, bels)	Sound Pressure (LpAm, decibels)
Idle	3.5	28.2
Fixed Disk (random writes)	4.1	33.8

System fan is usually off except when charging the battery

Batteries

This battery(s) in this product comply with EU Directive 2006/66/EC

Batteries used in the product do not contain:

- Mercury greater the 5ppm by weight
- Cadmium greater than 10ppm by weight

The battery type and chemistry used in the product is:
CR2032 (coin cell), Li-ion
6-cell high capacity Lithium-Ion battery (optional 8 cell available)

Additional information

This product is in compliance with the Restrictions of Hazardous Substances (RoHS) directive - 2002/95/EC.

This HP product is designed to comply with the Waste Electrical and Electronic Equipment (WEEE) Directive - 2002/96/EC.

This product is in compliance with California Proposition 65 (State of California; Safe Drinking Water and Toxic Enforcement Act of 1986).

This product is in compliance with the IEEE 1680 (EPEAT) standard at the Gold level, see www.epeat.net

Plastics parts weighing over 25 grams used in the product are marked per ISO 11469 and ISO1043.

This product contains 0% post consumer recycled plastic (by wt.)

This product is greater than 95.1% recycle-able when properly disposed of at end of life.

Packaging Materials

- External:
  - Corrugated 115 g
  - Corrugated Carton 455 g
  - Canon bag 5 g
- Internal:
  - Polyethylene low density 15g
  - Molded pulp 190g
- The Corrugated carton packaging material is made from 80% recycled content.
- The Corrugated packaging material is made from 80% recycled content.
- The Canon Bag packaging material is made from 80% recycled content.
- The Polyethylene low density packaging material is made from 60% recycled content.
- The Molded Pulp packaging material is made from 60% recycled content.

HP follows these guidelines to decrease the environmental impact of product packaging:

- Eliminate the use of heavy metals such as lead, chromium, mercury and cadmium in packaging materials.
- Eliminate the use of ozone-depleting substances (ODS) in packaging materials.
- Design packaging materials for ease of disassembly.
- Maximize the use of post-consumer recycled content materials in packaging materials.
- Use readily recyclable packaging materials such as paper and corrugated materials.
- Reduce size and weight of packages to improve transportation fuel efficiency.
- Plastic packaging materials are marked according to ISO 11469 and DIN 6120 standards.

HP ProBook 4730s Notebook PC

Energy Consumption	115 VAC	230 VAC	100 VAC
Normal Operation	9.29 W	10.44 W	9.23 W
Sleep (Energy Star low power mode)	1.18 W	1.08 W	1.16 W
Off	0.51 W	0.64 W	0.51 W

Heat Dissipation*	115 VAC	230 VAC	100 VAC
Normal Operation	32 BTU/hr	36 BTU/hr	32 BTU/hr
Sleep	4 BTU/hr	4 BTU/hr	4 BTU/hr
Off	2 BTU/hr	2 BTU/hr	2 BTU/hr

* Heat dissipation is calculated based on the measured watts, assuming the service level is attained for one hour.

Declared Noise Emissions (in accordance with ISO 7779 and ISO 9296)

System Fan Off	Sound Power (LWAd, bels)	Sound Pressure (LpAm, decibels)
Idle	3.5	29.3
Fixed Disk (random writes)	3.7	32.1

System fan is usually off except when charging the battery

Batteries

This battery(s) in this product comply with EU Directive 2006/66/EC

Batteries used in the product do not contain:

- Mercury greater the 5ppm by weight
- Cadmium greater than 10ppm by weight

The battery type and chemistry used in the product is:
CR2032 (coin cell), Li-ion
6-cell high capacity Lithium-Ion battery (optional 8 cell available)

Additional information

This product is in compliance with the Restrictions of Hazardous Substances (RoHS) directive - 2002/95/EC.

This HP product is designed to comply with the Waste Electrical and Electronic Equipment (WEEE) Directive - 2002/96/EC.

This product is in compliance with California Proposition 65 (State of California; Safe Drinking Water and Toxic Enforcement Act of 1986).

This product is in compliance with the IEEE 1680 (EPEAT) standard at the Gold level, see www.epeat.net

Plastics parts weighing over 25 grams used in the product are marked per ISO 11469 and ISO1043.

This product contains 0% post consumer recycled plastic (by wt.)

This product is greater than 97.1% recycle-able when properly disposed of at end of life.

Packaging Materials

- External:
  - Corrugated – 565 g
  - CANON bags – several layers – 5 g
- Internal:
  - Polypropylene – 15 g
  - Molded pulp – 225 g
- The Corrugated packaging material is made from 80% recycled content.
- The CANON bags - several layers packaging material is made from 80% recycled content.
- The Polypropylene packaging material is made from 60% recycled content.
- The Molded Pulp packaging material is made from 60% recycled content.

HP follows these guidelines to decrease the environmental impact of product packaging:

- Eliminate the use of heavy metals such as lead, chromium, mercury and cadmium in packaging materials.
- Eliminate the use of ozone-depleting substances (ODS) in packaging materials.
- Design packaging materials for ease of disassembly.
- Maximize the use of post-consumer recycled content materials in packaging materials.
- Use readily recyclable packaging materials such as paper and corrugated materials.
- Reduce size and weight of packages to improve transportation fuel efficiency.
- Plastic packaging materials are marked according to ISO 11469 and DIN 6120 standards.

HP ProBook 4330s, 4430s, 4530s, and 4730s Notebook PCs

Material Usage

This product does not contain any of the following substances in excess of regulatory limits (for reference of these limits please refer to the HP General Specification of the Environment: (http://www.hp.com/hpinfo/globalcitizenship/environment/supplychain/gen_specifications.html):

- Asbestos
- Certain Azo Colorants
- Certain Brominated Flame Retardants - may not be used as flame retardants in plastics
- Cadmium
- Chlorinated Hydrocarbons

- Chlorinated Paraffins
- Formaldehyde
- Halogenated Diphenyl Methanes
- Lead carbonates and sulfates
- Lead and Lead compounds
- Mercuric Oxide Batteries
- Ozone Depleting Substances
- Polybrominated Biphenyls (PBBs)
- Polybrominated Biphenyl Ethers (PBBEs)
- Polybrominated Biphenyl Oxides (PBBOs)
- Polychlorinated Biphenyl (PCB)
- Polychlorinated Terphenyls (PCT)
- Polyvinyl Chloride (PVC) - except for wires and cables, and certain retail packaging has been voluntarily removed from most applications.
- Radioactive Substances
- Tributyl Tin (TBT), Triphenyl Tin (TPT), Tributyl Tin Oxide (TBTO)

Nickel finishes that release greater than 0.5 µgrams/cm2/week, measured according to EN 1811:1998, are not used on any product surface designed to be frequently handled or touched by users.

End-of-life Management and Recycling

Hewlett-Packard offers end-of-life HP product return and recycling programs in many geographic areas. To recycle your product, please go to: http://www.hp.com/go/reuse-recycle or contact your nearest HP sales office. Products returned to HP will be recycled, recovered or disposed of in a responsible manner.

The EU WEEE directive (2002/95/EC) requires manufacturers to provide treatment information for each product type for use by treatment facilities. This information (product disassembly instructions) is posted on the Hewlett Packard web site at: http://www.hp.com/go/recyclers. These instructions may be used by recyclers and other WEEE treatment facilities as well as HP OEM customers who integrate and re-sell HP equipment.

Hewlett-Packard Corporate Environmental Information

For more information about HP's commitment to the environment:
Global Citizenship Report
http://www.hp.com/hpinfo/globalcitizenship/gcreport/index.html
Environment website
http://www.hp.com/environment
Eco-label certifications
http://www.hp.com/hpinfo/globalcitizenship/environment/productdesign/ecolabels.html
ISO 14001 certificates:
http://www.hp.com/hpinfo/globalcitizenship/environment/operations/envmanagement.html

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